

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

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Core Wireless Licensing S.a.r.l.,

*Plaintiff,*

vs.

LG Electronics, Inc.; LG Electronics  
MobileComm U.S.A., Inc.,

*Defendants.*

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)  
) No. 2:14-cv-00911-JRG-RSP (lead case)

) No. 2:14-cv-00912-JRG-RSP (consolidated)

**DEFENDANTS' MOTION FOR JUDGMENT AS A MATTER OF LAW (JMOL) ON  
INVALIDITY**

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## **I. INTRODUCTION**

Defendants LG Electronics, Inc. and LG Electronics ModileComm U.S.A., Inc. (collectively, “LG”) are entitled to judgment as a matter of law of that the asserted claims are invalid. Core Wireless Licensing S.a.r.l. (“Core”) cannot overcome the showing that the asserted claims are invalid for several independent reasons.

Claim 21 of U.S. Patent No. 7,804,850 (the ‘850 patent) is invalid for lack of enablement, lack of written description, anticipation, and obviousness. This claim purports to slow down transmission with reference to an integer, which this Court concluded had its full and plain meaning. Because an integer includes the full gambit of numbers—including negative and exceptionally large numbers, as well as zero—the specification does not enable a person of ordinary skill to make and use the full scope of the claimed invention without undue experimentation. For similar reasons, the claim lacks written description. Beyond those flaws, claim this claim is anticipated, as admitted to by an inventor of the patent. Moreover, claim 21 is obvious in light of multiple prior art references.

The same is true of claim 19 of U.S. Patent No. 6,633,536 (the ‘536 patent). Frame stealing, which is what this patent is directed to, was well known in the prior art, and the evidence shows the claim is in fact anticipated by prior art. Moreover, even if not every element can be found in a single prior art reference, the multitude of prior art shows a motivation to combine, rendering the claim obvious.

## **II. LEGAL STANDARD**

“The grant or denial of a motion for judgment as a matter of law is a procedural issue not unique to patent law,” and thus it is governed “under the law of the regional circuit in which the appeal from the district court would usually lie.” *Summit Tech., Inc. v. Nidek Co.*, 363 F.3d 1219, 1223 (Fed. Cir. 2004). In the Fifth Circuit, a court should grant judgment as a matter of law “not only when the non-movant presents no evidence, but also when there is not a sufficient ‘conflict in substantial evidence to create a jury question.’” *Travis v. Bd. of Regents of Univ. of Texas Sys.*, 122 F.3d 259, 263 (5th Cir. 1997).

[T]he court must consider all of the evidence (and not just that evidence which

supports the non-mover's case) in the light most favorable to the non-movant, drawing all factual inference in favor of the non-moving party, and leaving credibility determinations, the weighing of the evidence, and the drawing of legitimate inferences from the facts to the jury.

*Foreman v. Babcock & Wilcox Co.*, 117 F.3d 800, 804 (5th Cir. 1997) . Although a court should “give credence to the evidence favoring the nonmovant,” it should also credit “that ‘evidence supporting the moving party that is uncontradicted and unimpeached, at least to the extent that that evidence comes from disinterested witnesses.’” *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 151 (2000) (citation omitted). “‘A mere scintilla of evidence is insufficient to present a question for the jury.’” *Foreman*, 117 F.3d at 804 (quoting *Boeing Co. v. Shipman*, 411 F.2d 365, 374 (5th Cir. 1969) (en banc). Judgment as a matter of law is not appropriate “‘only when there is a complete absence of probative facts to the support a jury verdict’”; rather, “‘[t]here must be a conflict in substantial evidence to create a jury question.’” *Id.* (quoting *Boeing*, 411 F.2d at 375).

### III. ARGUMENT

#### A. Claim 21 of the '850 Patent Is Invalid.

##### 1. Lack of enablement under 35 U.S.C. § 112, ¶ 1

Claim 21 of the '850 patent purports to slow down transmissions by an “*integer* multiple of the current air interface transmission time interval.” *See* LGX603. In construing this language in the claim, the Court has held that “[t]he term ‘integer’ has its full plain and ordinary meaning and is not limited to whole numbers greater than 1.” ECF No. 541 at 7.

It is undisputed that the plain and ordinary meaning of “integer” includes negative whole numbers, zero, and very large whole numbers. 9/15/16 AM [Lanning] Tr. at 7:15-8:24. It is also undisputed that the specification of the '850 patent does not enable a person of ordinary skill to “make and use the *full scope* of the claimed invention without undue experimentation” (emphasis added), as would be required to satisfy the enablement requirement of 35 U.S.C. § 112, ¶ 1. *See* ECF No. 570-2, at 30 (jointly proposed final jury instruction on enablement). It is undisputed that when the integer is negative or zero, that would require time to go backwards or stand still — something that the '850 patent does not enable a person of ordinary skill (or

anyone, for that matter) to do. 9/15/16 AM [Lanning] Tr. at 8:6-18. And when the integer starts to become large — it is unclear how large would be too large — that would result in delays that would interfere with the operation of the overall system and in fact could be so long that the battery in the phone would die before the elements of the claim could be carried out by the phone; again, the '850 patent does not enable a person of ordinary skill to practice such an invention. *Id.* at 8:19-9:23. In particular, no amount of experimentation would allow a person of ordinary skill to practice the invention for negative integers, zero, and very large integers, and excessive experimentation would be required to determine how large an integer could be and still have the invention work. *Id.* at 7:15-9:23. As a result, claim 21 of the '850 patent is not enabled. *Id.* at 9:24-10:2, 25:22-25.

A case with a similar fact pattern is *AK Steel Corp. v. Sollac*, 344 F.3d 1234 (Fed. Cir. 2003). In that case, like this one, the claim was drafted to cover a range of numbers far greater than the range described and enabled by the patent. The Federal Circuit affirmed summary judgment of no enablement because, like here, “the specification does not enable a significant portion of the subject matter encompassed by the contested claims.” *Id.* at 1245.

Previously Judge Payne denied summary judgment on this issue on the basis that LG had failed to show that the claim was inoperable. *See* ECF No. 532 at 9–10. But as correctly noted by Judge Gilstrap in his denial of LG’s objection to Judge Payne’s ruling, “LG correctly argues that a claim may pass the § 101 inoperability test but nevertheless fail the § 112 enablement test.” ECF No. 573 at 2. Thus, proof that a claim is operable in some circumstances is not legally relevant to whether that same claim is enabled across its full breadth. Again, as the Federal Circuit has held, § 112 requires “the inventor [to] enable one of skill in the art to make and use the full scope of the claimed invention.” *CFMT, Inc. v. Yieldup Int’l Corp.*, 349 F.3d 1333, 1338 (Fed. Cir. 2003); *see also, e.g., EMI Grp. North Am. v. Cypress Semiconductor*, 268 F.3d 1342, 1348–49 (Fed. Cir. 2001) (addressing only inoperability with respect to 35 U.S.C § 101). The '850 patent fails to do so.

Accordingly, LG is entitled to judgment as a matter of law that claim 21 of the '850

patent is invalid for lack of enablement under 35 U.S.C. § 112, ¶ 1.

**2. Lack of written description under 35 U.S.C. § 112, ¶ 1**

For similar reasons, LG is also entitled to judgment as a matter of law that claim 21 of the '850 patent is invalid for lack of written description under 35 U.S.C. § 112, ¶ 1. To satisfy the written description requirement, the specification of the '850 patent must “convince persons of ordinary skill in the art that the inventor possessed the *full scope* of the invention.” *See* ECF No. 570-2, at 29 (jointly proposed final jury instruction on written description) (emphasis added). But it is undisputed that the inventor did not have in mind as his invention an “integer multiple . . .” where the integer is negative or zero (i.e., time goes backwards or stands still). 9/15/16 AM [Lanning] Tr. at 21:3-10, 11:15-23. And it is undisputed the inventor did not have in mind as his invention an “integer” equal to one, because then claim 21 would be the same as the prior art. 9/13/16 AM [Sebire] Tr. at 68:8-12; 9/15/16 AM [Lanning] Tr. at 11:3-14, 11:24-12:3; [9/15/16 PM [Jackson] Tr. at \_\_\_\_]. And it is undisputed that the inventor did not have in mind as his invention a very large “integer” resulting in an almost infinite delay, and it is unclear how large an integer the inventor really had in mind. 9/15/16 AM [Lanning] Tr. at 10:19-25, 12:4-8. As a result, claim 21 of the '850 patent is invalid for lack of written description. 9/15/16 AM [Lanning] Tr. at 11:15-12:8, 25:22-26:2.

An instructive case is *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1346 (Fed. Cir. 2005) (affirming judgment of no written description under § 112 where the claim tried to cover two embodiments but the specification only described one of them). In that case, the Federal Circuit explained:

[S]uppose that an inventor created a particular fuel-efficient automobile engine and described the engine in such detail in the specification that a person of ordinary skill in the art would be able to build the engine. Although the specification would meet the requirements of section 112 with respect to a claim directed to that particular engine, it would not necessarily support a broad claim to every possible type of fuel-efficient engine.

*Id.* at 1346. That is the situation of this case: The '850 patent describes an invention that might work for a limited number of intergers (such as when the integer is 2), but it does not show that the inventors possessed the *full scope* of the claim, including integers that are negative, zero, and

very large.

Previously Judge Payne denied summary judgment on this issue on the basis that LG had failed to show that the claim was inoperable. *See* ECF No. 532 at 9–10, 13–14. But as correctly noted by Judge Gilstrap in his denial of LG’s objection to Judge Payne’s ruling, inoperability under § 101 cannot be conflated with invalidity under § 112. *See* ECF No. 573 at 2. Thus, proof that a claim is operable in some circumstances is not legally relevant to whether that same claim lacks written description. *See, e.g., EMI Grp. North Am. v. Cypress Semiconductor*, 268 F.3d 1342, 1348–49 (Fed. Cir. 2001) (addressing only inoperability with respect to 35 U.S.C § 101).

Accordingly, LG is entitled to judgment as a matter of law that claim 21 of the ‘850 patent is invalid for lack of written description under 35 U.S.C. § 112, ¶ 1.

### **3. Anticipation Based on Testimony of Mr. Sebire**

LG is also entitled to JMOL that claim 21 of the ‘850 patent is invalid under 35 U.S.C. § 102 because Benoist Sebire, an inventor of the ‘850 patent, admitted that when the integer of the claimed “integer multiple” is “1,” then the claim is the same as the prior art. 9/13/16 AM [Sebire] Tr. at 68:8-11—an admission that is not disputed. LG’s expert Mark Lanning agreed with Mr. Sebire that the claim is invalid as anticipated by the admitted prior art—when the claimed integer is “1,” consistent with the plain and ordinary meaning. And, Core’s expert, Dr. Jackson, has admitted that he does not have an opinion on the validity of the patent when claimed “integer” is equal to 1. 9/13/16 PM [Jackson] Tr. at 65:8-16. Because a single prior art reference discloses all elements of the asserted claim, it is invalid as anticipated. *Therasense, Inc. v. Becton, Dickinson & Co.*, 593 F.3d 1325, 1332 (Fed. Cir. 2010).

### **4. Obviousness in light of Samsung (LGX607) and Willars (LGX608).**

Claim 21 of the ‘850 patent is also invalid based on the Samsung proposal, LGX607, in view of the teachings of U.S. Patent No. 6,480,476 (“Willars”), LGX608. A patent is invalid as obvious when “a skilled artisan would have had reason to combine the teachings of the prior art references to achieve the claimed invention” and the “skilled artisan would have had a reasonable expectation of success in doing so.” *In re Cyclobenzaprine Hydrochloride Extended-*

*Release Capsule Patent Litig.*, 676 F.3d 1063, 1068 (Fed. Cir. 2012). Samsung discloses an apparatus, namely a mobile device (UE) that can autonomously transmit using a TDM approach. (LGX607 § 2.3). As Mr. Lanning testified, Samsung in view of Willars discloses or renders obvious each of the limitations of claim 21 of the ‘850 patent. [9/15/16 AM [Lanning] Tr. at \_\_\_\_]. Samsung, for example, discloses checking to determine whether the apparatus is transmitting data packets in a current air interface transmission time interval. In particular, Samsung restricts the TTIs in which a mobile device can transmit. Mr. Lanning also testified that it would have been obvious to combine Samsung with the Willars reference, as the combination would have yielded a predictable and desirable result, based on the use of well-known prior art elements according to their known function, of the transmission metering disclosed in Samsung utilizing a sleep or timeout functionality as disclosed in Willars. [9/15/16 AM [Lanning] Tr. at \_\_\_\_]. Mr. Lanning’s testimony is supported by testimony from Core’s expert Dr. Jackson, who agreed that Samsung discloses a “virtual transmission time interval” described in the claim. [9/15/16 PM [Jackson] Tr. at \_\_\_\_].

##### **5. Obviousness in light of Kayama (LGX610).**

U.S. Application Publication No. US 2004/0028006 A1 (“Kayama”), LGX610, further renders Claim 21 obvious when Kayama is considered in conjunction with the knowledge of a person of ordinary skill in the art. Kayama discloses a computer system in a mobile device, which requires a memory and stored computer program instructions. For instance, Figures 2A-2C depict various mobile station embodiments described in Kayama, and these mobile stations comprise an “input unit” that executes “predetermined instruction operation, input operation, etc. about packet transmission.” (LGX610 at Figs. 2A-2C & ¶ 58 (describing mobile station composition including memory and storage); *see also* LGX610 ¶ 17, ¶¶ 59-60). In addition, Kayama discloses a VTTI. Namely, Kayama can set a minimum time between new transmissions when the base station broadcasts a “regulation signal,” and the VTTI in the exemplary figures and disclosures can be 1, 3, or 5 slots as shown in Figures 5 and 6.

A person of ordinary skill in the art would understand that Kayama utilizes a slot- based



system, i.e. a system that utilizes TTIs. (LGX610 at Fig. 5 & ¶ 66). Kayama also recognized that, in some cases, “there can occur a case where an extremely large number of packets flock within a short period of time, so as to fail to satisfy the required Eb/No [signal-to-noise ratio].” (LGX610 at ¶ 13). One of Kayama’s proposed solutions to this potential problem is to shift, by a predetermined period of time, the start times of packets. (LGX610 at ¶ 17). A person of ordinary skill in the art would understand that by limiting the number of simultaneous transmissions by delaying transmission start times using a “start time controlling means for shifting transmission start times of the individual packets,” Kayama limits the overall interference in the system. (LGX610 at ¶ 17). Kayama also discloses a “start time controller” in Figure 2A, which Kayama describes as “performing such control as to shift transmission start times of the individual packets. See Figure 2A. Accordingly, Mr. Lanning found that claim 21 of the ‘850 patent was obvious in view of Kayama. [9/15/16 AM [Lanning] Tr. at \_\_\_\_].

**6. Secondary considerations of non-obviousness.**

LG is entitled to judgment as a matter of law that there exists no secondary considerations of non-obviousness because Core advanced no legally sufficient evidentiary bases for which a reasonable jury could find for Core on this issue. See *Geo M. Martin Co. v. Alliance Machine Sys. Int’l*, 618 F.3d 1294, 1304 (Fed. Cir. 2010) (secondary considerations are considered “when present”). The testimony from LG’s expert, Mr. Lanning, established without opposition that there existed no commercial success linked to claim 21, and he also testified he was unaware of any evidence that the asserted claims satisfied a long-felt and previously unmet need. Mr. Lanning also testified that he was not aware of any evidence that others had tried and failed to make what is claimed in claim 21. Mr. Lanning also testified that he was not aware of any evidence that claim 21 achieved unexpected results. He also testified that he not aware of any praise from others in the field or any evidence that others in the field held surprise or disbelief regarding what is claimed in claim 21. 9/15/16 AM [Lanning] Tr. at 24:21-25:19.

**7. Lack of patentable subject matter under 35 U.S.C. § 101**

Finally, LG is entitled to judgment as a matter of law because claim 21 is drawn to

unpatentable subject matter. This Court denied LG's motion for summary judgment that claim 21 of the '850 patent is invalid under 35 U.S.C. § 101. *See* ECF No. 532 at 17 (holding as a matter of law that claim 21 is "patent-eligible" under *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014)). "Patent eligibility is a matter of law and is not properly submitted to a factfinder such as a jury." *ContentGuard Holdings, Inc. v. Apple Inc.*, No. 2:13-cv-1112-JRG, slip op. at 6 (E.D. Tex. Apr. 25, 2016). Accordingly, § 101 was not raised before the jury, but LG still maintains that as a matter of law claim 21 of the '850 patent is invalid under 35 U.S.C. § 101 for the reasons stated in its motion for summary judgment. *See* ECF Nos. 276, 315.

**B. Claim 19 of the '536 Patent Is Invalid.**

LG is also entitled to judgment of a matter of law that claim 19 of the '536 patent is invalid as both anticipated and obvious.

**1. Frame stealing and bad frame replacement was well known in the prior art**

Both sides agree that claim 19 of the '536 patent concerns frame stealing, which was well-known in the prior art: "Q. It's your testimony that you did not invent frame stealing, correct? A. That is correct." 9/12/16 PM Tr. at 86:17--19 (Testimony of Jyri Suvanen). Both sides also agree that replacing the "stolen" frame with a preceding good frame was also well known: "And you would agree with me that you did not invent bad frame replacement? A. I would agree." 9/12/16 PM Tr. at 87:9--10 (Testimony of Jyri Suvanen). As a result, it is undisputed that all but the last limitation of claim 19 (referred to at trial as element "d") are clearly in the prior art. As Dr. Fuja emphatically stated: "every cell phone since 1991 practices (a), (b), and (c), including IS-54." 9/14/16 PM Tr. at 131:7--11; *see also id.* at 128:25--129:6. The only purported point of novelty for claim 19 is the two-step method at the end of the claim for detecting a stolen frame (i.e., a frame containing a message). But as discussed below, that was disclosed in the prior art as well.

**2. Anticipation and obviousness in light of IS-54 (LGX569)**

LGX569 is the IS-54 prior art reference from 1992 (several years before the filing date of the '536 patent). It was not considered by the Patent Office during prosecution of the '536

patent. *See* LGX567; 9/14/16 PM Tr. at 78:10–79:10. IS-54 was the “2G” network used in the United States by AT&T, whereas in Europe the “2G” standard was GSM (the accused technology). *See* 9/14/16 PM Tr. at 51:17–52:1.

IS-54 teaches frame stealing. *See* 9/14/16 PM Tr. at 52:25–53:14; LGX569 § 2.7.3.1.1.1:

**2.7.3.1.1.1 Data Stream Format (FACCH)**

The FACCH block replaces (is used in place of) the user information block whenever it is to be transmitted. Each block is regarded as one signaling word. A FACCH message can consist of more than one such word. Messages that span multiple FACCH words can be interspersed with one or more transmissions containing user information.

IS-54 also teaches bad frame replacement (or “masking”), where a bad frame is replaced with a preceding good frame. *See* 9/14/16 PM Tr. at 74:14–:18; LGX569 § 2.2.2.2.3.2:

**2.2.2.2.3.2 Bad Frame Masking**

The bad frame masking system is based on a 6 state machine.

State 0 – No CRC error is detected. The received decoded speech data is used.

State 1 – A CRC error has been detected in the frame. The parameter values for R(0) and the LPC bits are replaced with the corresponding values from the last frame that was in state 0. The remaining decoded bits for the frame are passed to the speech decoder without modification.

State 2 – same action is taken as in state 1.

Thus, as discussed in the preceding section, IS-54 (like every cellphone since 1991) teaches elements (a) through (c) of claim 19.

IS-54 also discloses the two-step process in the last element of claim 19 of the ’536 patent, where a frame can be intentionally marked “bad” in which case the receiver will look inside the frame to see if it can find a message. *See* 9/14/16 PM Tr. at 53:15–54:11, 75:8–76:10; LGX569 at LGE0095176 & § 2.2.2.2.3.2:

The 49 data bits in a FACCH word is appended with a 16-bit CRC to detect the presence of channel errors in the data as well as providing a mechanism for distinguishing the FACCH data from speech data. The CRC is computed over the entire 49 bit data as well as the DVCC. (See 2.7.3.1.1.3).

For explanatory purposes, one method of differentiating between speech blocks and FACCH blocks is to utilize the information present in the respective CRC fields.

#### 2.2.2.2.3.2 Bad Frame Masking

Based on the CRC comparison, an error in the 12 most perceptually significant bits of the speech frame may be detected. This CRC comparison failure can occur because the data was corrupted by channel errors or because a FACCH message was transmitted in place of the speech data. In either case, use of this received data for the generation of the speech signal can cause severe degradation to the speech quality. To prevent this problem, a bad frame masking strategy could be employed. The strategy described in this section may be employed.

Accordingly, IS-54 teaches (or at least renders obvious) each and every limitation of claim 19 of the '536 patent. 9/14/16 PM Tr. at 80:23–81:2.

### 3. Obviousness in light of IS-54 (LGX569) and Brolin (LGX571)

LGX571 is the Brolin patent referenced in the '536 patent specification. Brolin issued on Oct. 9, 1984. Brolin in combination with IS-54 was not considered by the Patent Office during prosecution of the '536 patent. 9/14/16 PM Tr. at 79:6-10. Brolin teaches using a unique signature to distinguish between one of three transmission modes. LGX571 at Claim 1; LGX567 at 6:5-12; 9/14/16 PM Tr. at 60:6-23. One of ordinary skill in the art would have been motivated to combine the method of distinguishing between different transmission modes taught in Brolin with the IS-54 frame stealing solution to address the common problem of transmitting different types of data over the same line. 9/14/16 PM Tr. at 60:10-23; 131:16-132:5.

### 4. Obviousness in light of IS-54 (LGX569) and Davis (LGX570)

LGX570 is the Davis patent application, which was published on May 27, 1993. Davis in

combination with IS-54 was not considered by the Patent Office during prosecution of the '536 patent. 9/14/16 PM Tr. at 79:6-10. Davis teaches switching between data and speech modes using a parity fail signal coupled with codewords for each of the two modes. *See, e.g.*, LGX570; 9/14/16 PM Tr. at 63:2-13. One of ordinary skill in the art would have been motivated to combine the method of distinguishing between data and speech modes taught in Davis with the IS-54 frame stealing solution to address the common problem of transmitting different types of data over the same line. 9/14/16 PM Tr. at 131:16-132:5.

**5. Secondary considerations of non-obviousness**

Finally, LG is entitled to judgment as a matter of law as there is no evidence of secondary considerations of non-obviousness upon which a reasonable jury could find in Core's favor on the issue of invalidity. Dr. Fuja testified that he had not seen any evidence of commercial success, industry praise, or unexpected results in connection with claim 19 of the '536 patent. 9/14/16 PM Tr. at 88:4–89:23.

For all of the reasons above, LG is entitled to JMOL that claim 19 of the '536 patent is anticipated by IS-54 and obvious in light of (i) IS-54, or (ii) IS-54 and Brolin, or (iii) IS-54 and Davis.

**IV. CONCLUSION**

For the foregoing reasons, the Court should grant judgment as a matter of law in favor of LG that the asserted claims are invalid.

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Respectfully submitted,

By: /s/ David L. Anderson

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MobileComm U.S.A., Inc.*

**CERTIFICATE OF SERVICE**

The undersigned certifies that the foregoing document was filed electronically in compliance with Local Rule CV-5(a). As such, this document was served on all counsel who have consented to electronic service on September 15, 2016. *See* Local Rule CV-5(a)(3)(A).

/s/ *Melissa R. Smith*  
Melissa R. Smith